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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,337	11/13/2001	Achintya Bhowmik	42390.P11434	3513

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Charles K. Young
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER

GUERRERO, MARIA F

ART UNIT	PAPER NUMBER
2822	

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,337

Applicant(s)

BHOWMIK ET AL.

Examiner

Maria Guerrero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the Election filed September 16, 2003.
Claims 5-11 and 23-28 are canceled.
Claims 1-4 and 12-22 are pending.

Election/Restrictions

2. Applicant's election without traverse of Group I (claims 1-4 and 12-22) in Paper No. 4 is acknowledged.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 12, 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoon et al. (E.P. 0413903A1).

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6. Yoon et al. teaches forming two electrodes, depositing a dielectric between the two electrodes, creating an electric field between the two electrodes, and forming a waveguide between the two electrodes in the presence of the electric field (Fig. 2, page, 3, lines 50-58, page 4, lines 1-35, page 5, lines 15-55). Yoon et al. shows defining the two electrodes by a lithography process in a substrate (page 8, lines 1-15). Yoon et al. teaches the waveguide comprising an organic crystal material having an organic molecule with a donor portion, an acceptor portion coupled to the donor portion via a conjugates backbone (page 6-7). Yoon et al. shows depositing a cladding over the waveguide (Fig. 3, page 8, lines 35-43). Yoon et al. inherently discloses growing a crystal by controlling the evaporation of the solvent (page, lines 35-55). Yoon et al. teaches introducing an optical signal and applying a voltage to the two electrodes (page 8, lines 50-56, page 9, lines 1-10). Yoon et al. shows controlling the cooling (page 9, lines 5-8).

7. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Komatsu (U.S. 5,334,551).

8. Komatsu teaches forming two electrodes, creating an electric field between the two electrodes, depositing a dielectric between the two electrodes, and forming a waveguide between the two electrodes in the presence of the electric field (Abstract, col. 3, line 67, col. 4, lines 1-8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komatsu (U.S. 5,334,551) in view of Jain et al. (U.S. 6,221,565).

Regarding claims 13-14, Komatsu does not specifically show polishing the waveguide as claimed. However, Jain et al. shows the step of polishing the waveguide (col. 12, lines 30-40).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Komatsu reference by including the step of polishing the waveguide as taught by Jain et al. in order to improve the planarity of the structure.

Conclusion

10. The recitation a method of changing a phase of an optical signal in an electro-optic modulator... has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).


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11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koch et al. (U.S. 5,288,659), Kawase (U.S. 6,661,034), and Jenekhe (U.S. 4,717,762) teach several steps pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Guerrero whose telephone number is 571-272-1837.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Maria Guerrero
Patent examiner
December 13, 2003